

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 424 (DAVIDSONVILLE ROAD) AND DUKE OF KENT DRIVE/HYMAN LANE IN ANNE ARUNDEL COUNTY, MARYLAND. MODIFICATIONS INCLUDE THE INSTALLATION OF 16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEADS AND AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTONS FOR THE SOUTH LEG OF MD 424 AND THE WEST LEG OF DUKE OF KENT DRIVE. MD 424 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FIVE-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 424 APPROACHES OPERATING CONCURRENTLY AND THE DUKE OF KENT DRIVE/HYMAN LANE APPROACHES OPERATING CONCURRENTLY. PERMISSIVE/EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND MD 424.

NEW ALTERNATE ACTUATED PEDSTRIAN PHASE WITH AUDIBLE PUSHBUTTONS WILL BE PROVIDED ACROSS THE SOUTH LEG OF MD 424 AND AN ACTUATED AUDIBLE PEDESTRIAN PHASE ACROSS THE WEST LEG OF DUKE OF KENT DRIVE.

APS MESSAGE FOR CROSSING MD 424 (DAVIDSONVILLE ROAD) FROM THE EAST:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS DAVIDSONVILLE AT HYMAN, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING MD 424 (DAVISONVILLE ROAD) FROM THE WEST:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS DAVIDSONVILLE AT DUKE OF KENT, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING DUKE OF KENT DRIVE:

- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS DUKE OF KENT AT DAVIDSONVILLE, WAIT".
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

THE EXISTING NEMA SIZE '6' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER WITH VIDEO DETECTION AND ALL ASSOCIATED EQUIPMENT WILL CONTINUE TO BE USED. A 2-WIRE CENTRAL CONTROL UNIT WILL BE ADDED TO THE CABINET.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9571	4	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
			- 2 EACH R10-3(1) "DAVIDSONVILLE ROAD" - (9"x15")
			- 2 EACH R10-3(1) "DUKE OF KENT DRIVE" - (9"x15")

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. LEE STARKLOFF
DISTRICT ENGINEER
PHONE: (410) 841-1001

MS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
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MR. JOSEPH GECKLE
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
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MR. ED RODENHIZER
SUPERVISOR - SIGNAL SHOP
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MR. MIKE STOCKER
SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE)
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MR. MIKE HUBER
DISTRICT UTILITY ENGINEER
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MS. CORREN JOHNSON
CHIEF - TRAFFIC OPERATIONS DIVISION
PHONE: (410) 787-7630

MR. EUGENE BAILEY
CHIEF - SIGN OPERATIONS SECTION
PHONE: (410) 787-7670

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

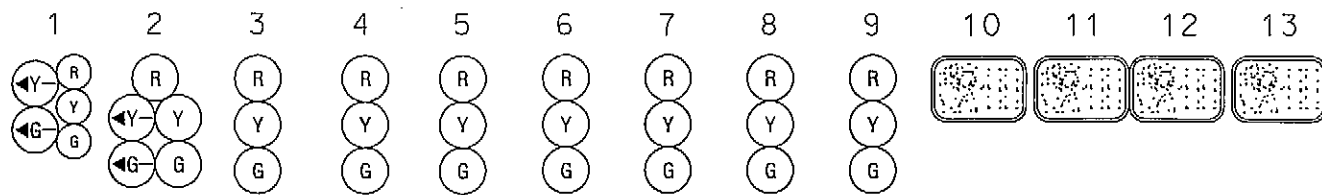
ITEM NO.	QUANTITY	UNIT	DESCRIPTION
1001	1	EA	MAINTENANCE OF TRAFFIC
2001	5	CY	CLASS 2 EXCAVATION
2002	2	CY	TEST PIT EXCAVATION
5003	500	LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5004	550	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	50	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	280	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	875	SF	5 INCH CONCRETE SIDEWALK
6003	61	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8002	1	EA	2-WIRE APS CENTRAL CONTROL UNIT
8008	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	4	EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8018	4	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8027	1	EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8043	100	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8045	4	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8047	100	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8058	700	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8060	750	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8068	34	SY	NEG - APPROVED - FURNISH & INSTALL TOPSOIL (PLACEMENT) 4" DEPTH
8069	17	SY	NEG - APPROVED - FURNISH & INSTALL TURFGRASS ESTABLISHMENT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:

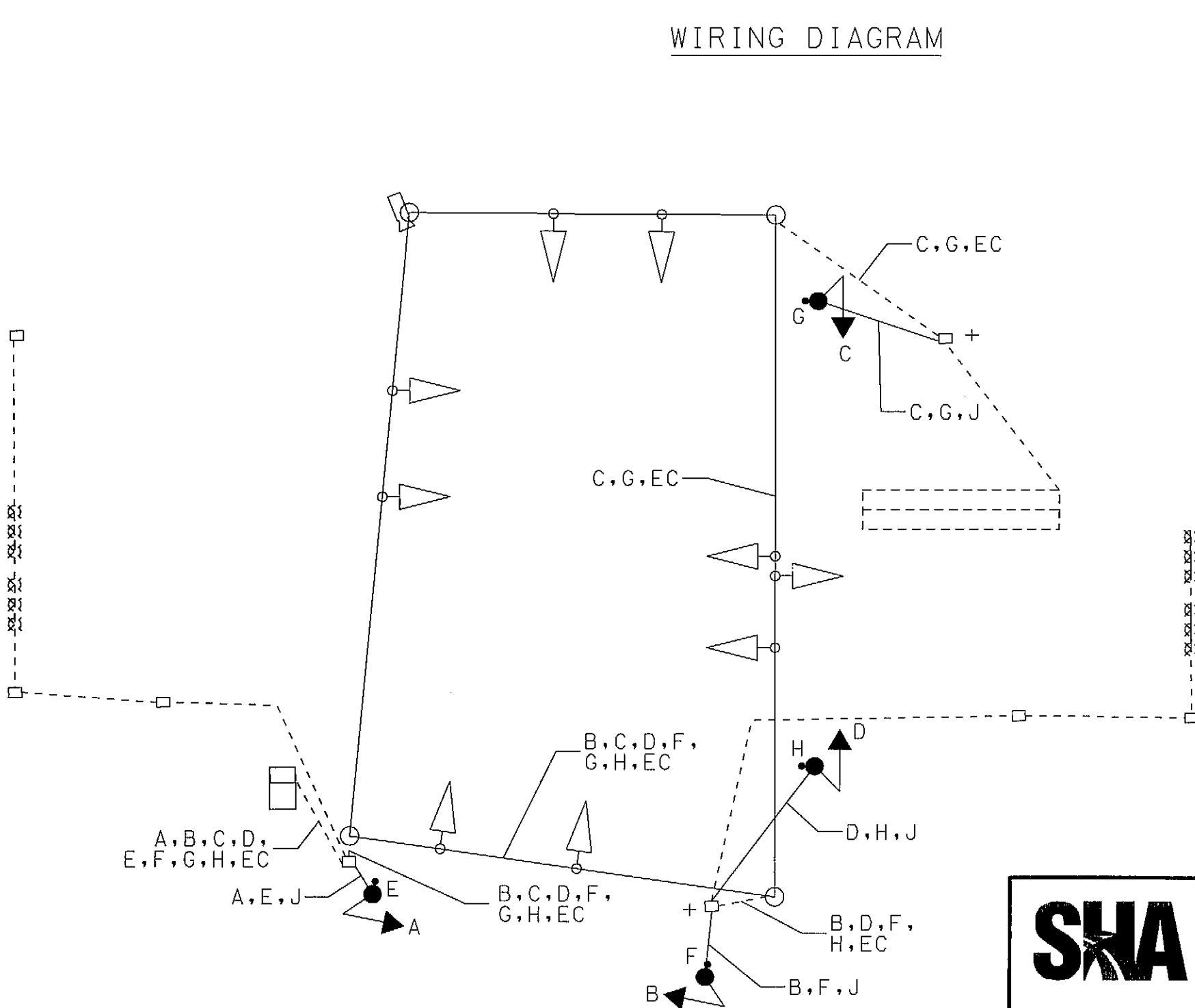
NONE.

PHASE CHART



PHASE 1 + 6	+G/G	+G/G	G	R	R	R	R	R	R	DW	DW	DW	DW	1
1 + 6 CHANGE	+Y/G	+Y/G	G	R	R	R	R	R	R	DW	DW	DW	DW	1
PHASE 2 + 6	G	G	G	G	G	R	R	R	R	W	W	DW	DW	1
PED CLEARANCE	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW	1
2 + 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	1
PHASE 4 + 8	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW	1
4 + 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	1
PHASE 4 ALT + 8	R	R	R	R	R	G	G	G	G	DW	DW	W	W	1
PED CLEARANCE	R	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW	1
4 ALT + 8 CHANGE	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	1
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	1

WIRING DIAGRAM



TOD NO: XY139-11
SHA NO: AA189B59
MD 424 @ Duke of Kent Drive/Hyman Ln; MD 450 @ Housley Road

WIRING KEY

- A,B,C,D } 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- E,F,G,H } 2 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
- J } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
- EC } EXISTING CABLE

LEGEND

+ - 3/4 IN. X 10 FT. GROUND ROD

**McCormick
Engineers & Planners
Since 1946 Taylor**

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BY: NJM/naco

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

**MD 424 (DAVIDSONVILLE ROAD) AT
DUKE OF KENT DRIVE/HYMAN LANE
CROFTON, MARYLAND**

GENERAL INFORMATION SHEET

SCALE NONE DATE JULY 22, 2013 CONTRACT NO. XY1395185

DESIGNED BY NJM COUNTY ANNE ARUNDEL

DRAWN BY NJM LOGMILE 02042407.80

CHECKED BY BSH /w/mob T.I.M.S. NO. L664

F.A.P. NO. T.O.D. NO.

T.S. NO. 2380F-GI SG-03OF SG-03 SHEET NO. 3 OF 5